



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,013	02/17/2004	Joseph M. Steiner JR.	59.0053	9576
25576	7590	09/01/2006	EXAMINER	
SCHLUMBERGER IPC ATTN: TIM CURINGTON 555 INDUSTRIAL BOULEVARD, MD-21 SUGAR LAND, TX 77478			WONG, ALBERT KANG	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,013

Applicant(s)

STEINER ET AL.

Examiner

Albert K. Wong

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) ✓
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2612

1. This Office action is in response to the application filed February 17, 2004. Claims 1-27 are pending.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner 5,387,907 in view of Humboldt WO 01/49001.

Regarding claim 1, Gardner teaches in col. 7 and figures 4-6 the determination of operating characteristics of a wireline cable at the surface and the effect of temperature on the operating characteristics of the cable. It is well known that temperature affects the operating characteristic of the cable. Gardner teaches the estimation of the data rate of the cable and determining the optimum frequency. Gardner does not teach the estimation of the data rate requirements of a tool string. Since the wireline is to be used with a sonde (essentially a tool string), it would have been obvious to estimate the data rate requirements so that the tool string may operate within the parameters of the cable. Gardner does not teach the modification of the tool string of the data rate of the cable does not match the downhole rate of the cable. Humboldt teaches a tool string communicating with a cable. Once the downhole rate of the cable has been determined, the tool string is altered so that the data rate does not exceed the rate of the cable. It would have been obvious to adjust the tool string at the surface to ensure proper operation down hole when the system does not permit adjustment within the downhole environment.

Art Unit: 2612

Regarding claims 2-4, figure 4-6 are graphs depicting the operating characteristics of a wireline cable. It would have been obvious that such values are determined by measurements, either above ground or within the hole.

Regarding claim 5, Humboldt teaches the determination of the SNR of the cable downhole. It would have been obvious to perform the same determination at the surface to prevent a defective cable from being used.

Regarding claim 6, as shown in Figure 5 of Gardner, the temperature negatively affects the operating characteristic. It would have been obvious to use a linear temperature gradient assumption since the temperature rises with depth and a linear model is the simplest estimate for calculation.

Regarding claims 7-8, the modeling characteristic chosen would be dependent on the depth of the well as well as the measured temperature changes in the well. Thus, the use of a two-part gradient assumption would be obvious if there is an abrupt change in temperature at a certain depth. It would have been obvious to create a model that approximates the downhole temperature characteristics.

Regarding claim 9, it would have been obvious to use actual measured temperature values to gain a more accurate estimate since downhole temperature values are not easily predicted.

Regarding claims 10-11, it would have been obvious to add or subtract tools to reduce or increase data based on the wireline cable capacity. More tools generates more data and thus, requires greater bandwidth.

Art Unit: 2612

Regarding claim 12, the claimed analyzer and modeler are merely automated tools for performing the determination step recited in the method claims. It would have been obvious to create specialized tools to eliminate human operator error. Automated testing tools are found in virtually all testing environments where a test must be performed frequently. This saves the time and expense of setting up the test each time it is required.

Regarding claims 13-20, as stated above, the performance of the various steps would have been obvious. Similarly, it would have been obvious to automate the steps to eliminate the human operator errors.

Regarding claims 21-27, these claims recite the software for the automated modeler. It would have been obvious to use a computer to perform the modeling functions and thus, it would have been obvious to use software to control the computer since that is conventional.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert K. Wong whose telephone number is 571-272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Albert K. Wong
August 29, 2006



ALBERT K. WONG
PRIMARY EXAMINER